

*PODOCNEMIS SOMALIENSIS*, A NEW  
PLEURODIRAN TURTLE FROM THE  
MIDDLE EOCENE OF SOMALIA

by C. A. WALKER

ABSTRACT. A new pleurodiran turtle, *Podocnemis somaliensis*, is described from the Middle Eocene of Somalia.

BETWEEN 1928 and 1930 the fragments of a fairly complete turtle shell were collected by W. A. Macfadyen and J. A. Hunt from the Middle Eocene of Somalia (then British Somaliland), along with numerous nautiloids. The specimen was presented to the Sedgwick Museum, Cambridge, and was then sent to the British Museum (Natural History) for repair and description, but it has remained undescribed until now.

The geology of the area concerned was dealt with in detail by Macfadyen (1933, 1952) and, to some extent, by Haas and Miller in their description of the nautiloids (1952).

Family PELOMEDUSIDAE  
Subfamily PELOMEDUSINAE  
Genus PODOCNEMIS Wagler 1830

*Podocnemis somaliensis* sp. nov.

Plate 80

*Diagnosis.* Nuchal large and broad; its lateral sutures not straight but rather sigmoid; notch in anterior border probably absent (or, if present, very small). Carapace almost as broad as long, widest part just behind bridge. Six neurals, behind which 6th–8th pairs of pleurals meet in mid-line. Anterior lobe of plastron wide, with blunt anterior edge; entoplastron broader than long; xiphiplastral symphysis longest.

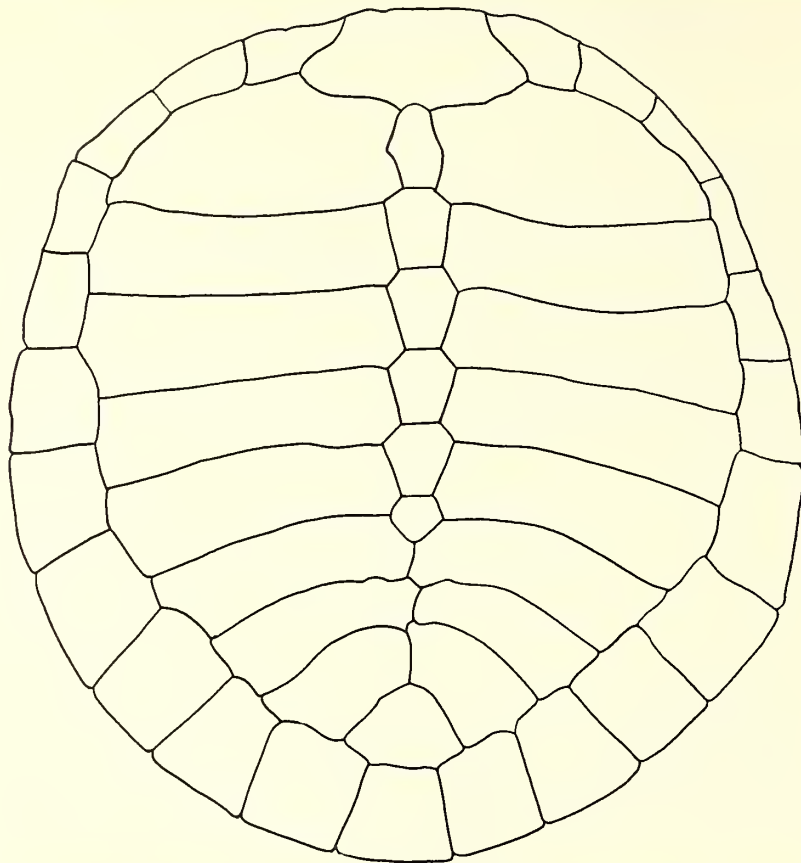
*Holotype.* The unique specimen, Sedgwick Museum C 54.276: an almost complete carapace and plastron.

*Occurrence.* Lower half of the Nautilus Beds, Lower Daban Series, Middle Eocene (Lutetian); Bijo Gora River, near Las Daban (10° 22' N., 45° 14' E.), some 25 km. ESE. of Berbera, Somalia.

*State of preservation.* The shell has suffered some crushing. The outline of the carapace is distorted a little at both ends. The plastron has been damaged to a greater degree, and many of the sutures have been obscured, especially on the outer surface where plaster has been used to fill in eroded areas of bone. There are no shield furrows visible.

The nuchal lacks a portion from the leading edge backwards. All the neurals are present, but the suture between the first and second cannot be distinguished. All the pleurals, except the seventh and eighth pairs and the first right, are distorted to some extent.

The plastron has suffered slight distortion in such a way that the sagittal suture no longer forms a straight line, its front part being bent to the right. The sutures of the entoplastron are obscured on the left side by plaster; the sagittal suture and the posterior suture of the right epiplastron have been covered by plaster on the outer surface but



TEXT-FIG. 1. *Podocnemis somaliensis* sp. nov., reconstruction of the carapace in dorsal view, Sedg. Mus. C 54.276.  $\times \frac{1}{4}$ .

remain visible in places on the visceral side. On the left side the mesoplastron is almost entirely absent and large sections of the hyoplastron and hypoplastron are also missing. The mesoplastron can be seen on the right, but there has been distortion and its inner

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#### EXPLANATION OF PLATE 80

*Podocnemis somaliensis* sp. nov., holotype, Sedgwick Museum C 54.276. Middle Eocene of Somalia.

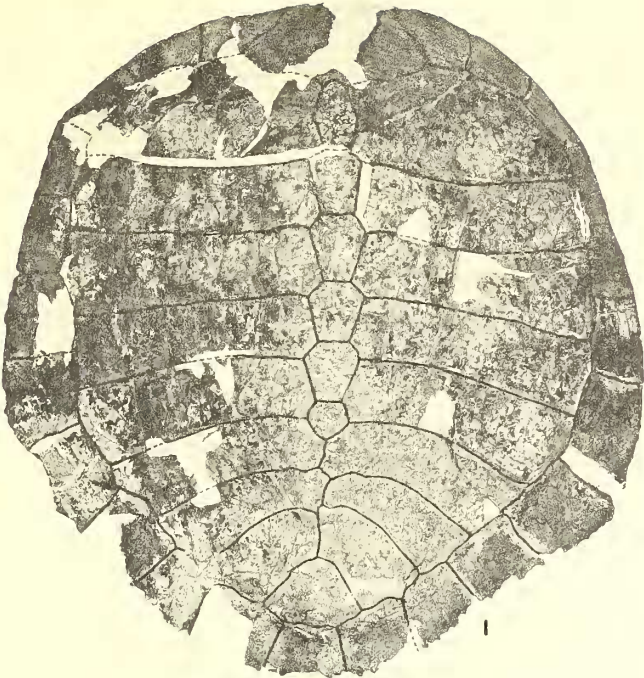
Fig. 1. Dorsal view of carapace. (Nuchal, first neural, and suprapygal are foreshortened.)

Fig. 2. Right lateral view of whole shell.

Fig. 3. Visceral view of plastron.

Fig. 4. Ventral view of plastron, with carapace in position.

Magnification  $\frac{1}{5}$  natural size.



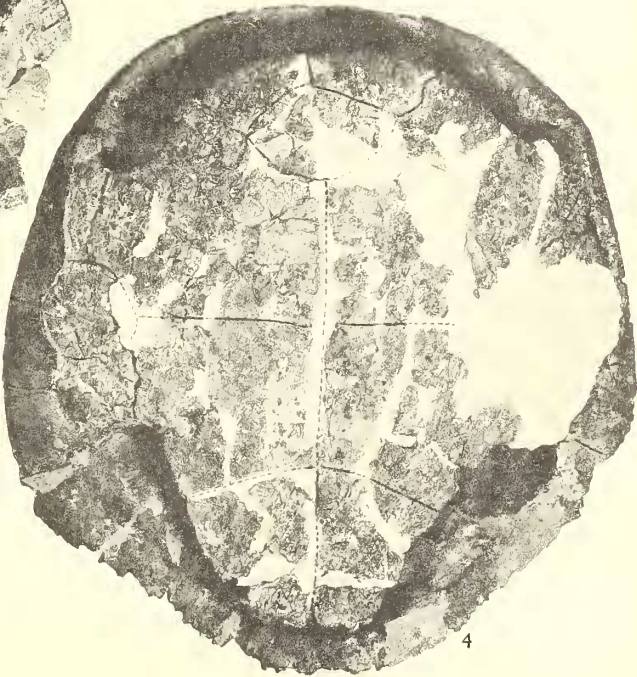
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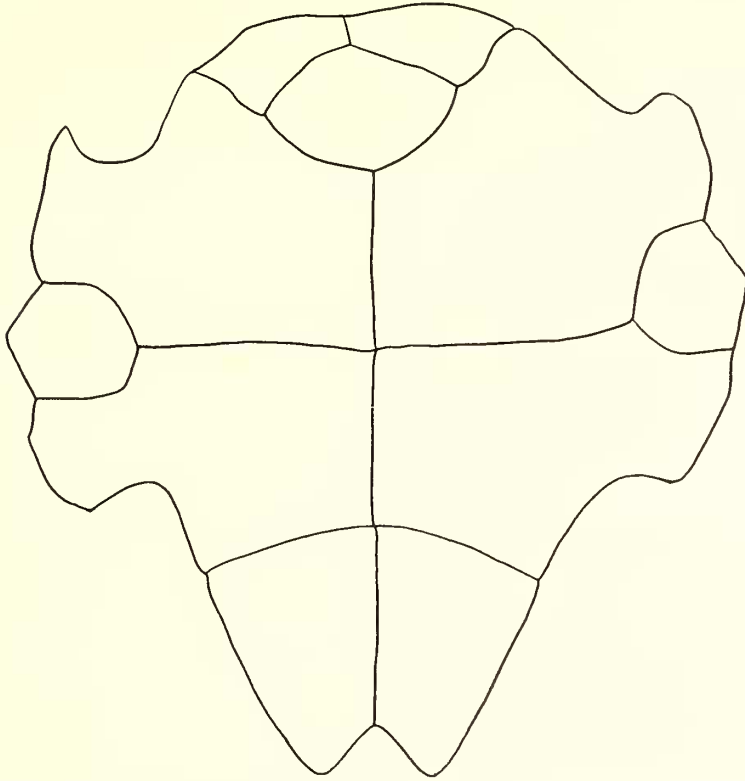
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WALKER, Eocene pleurodiran turtle



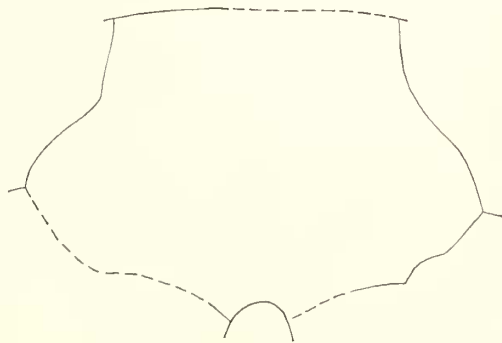
edge is imperfect. The xiphiplastra are broken off in front of the notch and their lateral margins are chipped.

Of the two sets of buttresses the right is more perfect than the left. Short stumps of the ilia are fused to the carapace and of the pubes and ischia to the plastron.



TEXT-FIG. 2. *P. somaliensis* sp. nov., reconstruction of the plastron in ventral view, Sedg. Mus. C 54.276.  $\times \frac{1}{4}$ .

*Description. Carapace.* The carapace is almost as wide as long, with its greatest width just behind the bridge. The nuchal is relatively large, being broader than long, and its lateral sutures are slightly sigmoid rather than straight (text-fig. 3). The first neural, which butts on to the nuchal, forms an elongated hexagon widest in the middle; neurals 2-5 are also hexagonal and almost equal in size, but the greatest width of each is near its anterior end; neural 6 is smaller, pentagonal, and wedged between pleurals 5 and 6. The suprapygal is roughly pentagonal



TEXT-FIG. 3. *P. somaliensis* sp. nov., dorsal view of the nuchal.  $\times \frac{1}{2}$ .

with wide angles and is considerably broader than long. The pygal, although incomplete, does not seem to be enlarged. There are 8 pairs of pleurals, the first being the largest and the others becoming successively smaller towards the suprapygal; pleural 2 is concave anteriorly, 3 is biconcave, while 4–8 are convex in front and concave behind. The axillary and inguinal buttresses are located under the first and fifth pleural plates, the axillary being the larger (as is usual in *Podocnemis*). The visceral surface is not well preserved; the iliac scars occupy a position on either side of the mid-line under the seventh and eighth pleurals. Of the 11 pairs of peripherals nos. 4–7 are connected with the bridge.

*Plastron*. The anterior lobe is wide with a straight anterior edge. The suture separating the two epiplastra in the mid-line is short; from its posterior end the margin of the epiplastron runs obliquely outwards and backwards, separating it from the entoplastron, and then outwards and forwards, separating it from the hyoplastron. The entoplastron appears short and wide on the outer surface, but on the inner surface its outline is different (text-figs. 4, 5). Only one mesoplastron is preserved; it is badly crushed and the sutures are difficult to see, but it is wider than long. The sutures between the hyoplastra and hypoplastra are straight, but those between the hypoplastra and xiphoplastra are slightly curved, concave towards the rear. The xiphoplastra form the longest part of the sagittal suture but are incomplete posteriorly, thus making it impossible to give any true indication as to the size and shape of the notch. The pubic and ischial scars are well represented, with the ischia probably meeting in the mid-line, although some breakage has occurred at this point.

*Measurements*. (E) = estimated, (R) = right side, (V) = visceral, (O) = outer.

<i>Carapace</i>				<i>Plastron</i>	
Length			450 mm. (E)	Sagittal length	377 mm. (E)
Maximum width			424 mm.	Sagittal length of anterior lobe	68 mm.
	<i>Length</i>	<i>Maximum Width</i>	<i>Anterior Width</i>	Sagittal length of bridge	177 mm.
Nuchal	76.5	120	74 mm.	Sagittal length of posterior lobe	132 mm. (E)
Neurals	1. 56.5	29.5	15 mm.	Length of epiplastral symphysis	{ 18 mm. (V) 19.5 mm. (O)
	2. 41.5	33.5	17 mm.	Length of entoplastron	62 mm.
	3. 41.5	35.5	21.5 mm.	Length of hyoplastral symphysis	{ 98 (R) 93 mm. (EV) 94 mm. (O)
	4. 38	35	18 mm.	Length of hypoplastral symphysis	{ 94 (R) 90 mm. (EV) 90 mm.
	5. 38	35	20 mm.	Length of xiphoplastral symphysis	{ 103 (R) 111 mm. (EV) 106 mm. (EO)
	6. 25.5	27	17 mm.	Length of mesoplastron	64 mm. (RO)
Suprapygal	48	64	—	Width immediately anterior to bridge	254 mm.
Pygal	50 (E)	34.5	65 mm. (E)	Width immediately posterior to bridge	225 mm.
	<i>Inner length</i>	<i>Outer length</i>		Width of entoplastron	87 mm. (V)
Peripherals (R)	1. 27	55 mm.		Width of mesoplastron	68 mm. (EO)
	2. 41	49 mm.			
	3. 44	57.5 mm (E)			
	4. 51.5	55 mm. (E)			
	5. 45.5	51.5 mm.			
	6. 47	58.5 mm.			
	7. 59	73 mm. (E)			
	8. 50 (E)	62 mm. (E)			
	9. 48	49 mm. (E)			
	10. 38	60 mm. (E)			
	11. 46	50 mm. (E)			